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Filed	:	HEREWITH
Docket No.:		GMI 5516 D1
Title	:	INSPECTION EQUIPMENT INTEGRITY ENHANCEMENT SYSTEM

Divisional Application of:
Serial No.: 09/927/845 Examiner: Thomas Noland
Filed: August 10, 2001 Group Art Unit: 2856
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IN THE CLAIMS

Claim 1. (Canceled)

Claims 2-10 (Canceled)

Claim 11. (Previously presented) An integrity checking system having independent integrity checking, the system comprising:

a conveyor belt for conveying packs through the system;

a scale associated with the conveyor belt that weighs packs while they move on the conveyor belt;

checkweigher logic coupled to the scale for determining whether the pack within a desired weight range;

a pack reject device controlled by the checkweigher logic that rejects packs outside the desired weight range;

independent integrity checking logic; and

multiple sensors coupled to the checkweigher system and independent therefore, providing information to the independent integrity checking logic regarding movement of the packs through the checkweigher system.

Claim 12. (Previously presented) The checkweigher system of claim 11 wherein the sensors comprise photo-eyes positioned along the conveyor.

Claim 13. (Previously presented) The checkweigher system of claim 11 wherein a first sensor comprises a photo-eye that detects pack skew prior to weighing.

Claim 14. (Previously presented) The checkweigher system of claim 13 wherein the first sensor further detects packs too closely spaced for proper weighing.

Claim 15. (Previously presented) The checkweigher system of claim 11 wherein a second sensor detects whether a pack is properly traveling down a reject path.

Claim 16. (Previously presented) The checkweigher system of claim 15 wherein the second sensor further detects backups on the reject path.

Claim 17. (Previously presented) The checkweigher system of claim 11 wherein a third sensor detects whether a pack is traveling down an accept path.

Claim 18. (Previously presented) The checkweigher system of claim 17 wherein the third sensor detects whether the accept path is blocked.

Claim 19. (Previously presented) The checkweigher system of claim 11 wherein a fourth sensor detects whether the reject device has sufficient air pressure.

Claim 20. (Previously presented) The checkweigher system of claim 11 wherein the independent integrity checking logic is operable to generate multiple messages regarding the integrity of the integrity checking system.

Claim 21. (Previously presented) The checkweigher system of claim 11 wherein the independent integrity checking logic is operable to shut down the conveyor belt.

Claim 22. (Previously presented) A method of checking the integrity of a checkweigher, the method comprising:

independently sensing a pack on a conveyor line of the checkweigher;

determining if the pack is skewed based on a length of time that the pack is sensed;

determining if consecutive packs are too closely spaced to obtain a proper weight based on a length of time between sensing the consecutive packs; and

providing a message independent of the checkweigher representative of such determinations.

Claim 23. (Previously presented) The method of claim 22 and further comprising providing a reject signal to a reject device if either determination is positive.

Claim 24. (Previously presented) The method of claim 23 and further comprising independently detecting if a pack was properly rejected.

Claim 25. (Previously presented) The method of claim 22 and further comprising independently detecting if a properly rejected pack is blocking a reject path.

Claim 26. (Previously presented) The method of claim 22 and further comprising independently detecting if a pack was properly accepted.

Claim 27. (Previously presented) A method of checking the integrity of a checkweigher that measures the weight of packs while moving on a conveyor belt, the method using logic independent from the checkweigher comprising:

receiving accept and reject signals from the checkweigher based on the checkweigher=s measurements of the packs;

independently determining if the packs were properly positioned on the conveyor for weighing;

receiving sensor signals independent of the checkweigher indicative of whether packs are properly accepted or rejected in accordance with the accept and reject signals; and

generating messages regarding the integrity of the checkweigher system based on a comparison of the sensor signals and the accept and reject signals received from the checkweigher.

Claim 28. (Previously presented) The method of claim 27 and further comprising generating a reject signal if it is determined that a pack is not properly positioned on the conveyor.

Claim 29. (Previously presented) The method of claim 28 and further comprising logging rejected packs.

Claim 30. (Previously presented) The method of claim 29 and further comprising generating a message if ten packs in a row were rejected.

Claim 31. (Previously presented) The method of claim 29 and further comprising generating a message if ten of the last thirty packs were rejected.

Claim 32. (Previously presented) The method of claim 27 and further comprising detecting if packs are backed up in various positions on the conveyor.

Claim 33. (Previously presented) The method of claim 27 wherein the messages are selected from a group consisting of warnings, fatal errors and nonfatal faults.

Claim 34. (Previously presented) The method of claim 27 wherein the messages are representative of faults selected from the list consisting of pack skew, insufficient gap, checkweigher response fault, checkweigher locked on, checkweigher locked off, air pressure fault, ten rejected in a row, ten of thirty rejected, pack not rejected, pack not accepted, photo-eye failure, line backup, and reject bin overflow.

Claim 35. (Previously presented) A kit for installing on a checkweigher to check the integrity of the checkweigher, the kit comprising:

a plurality of independent sensors for use on the checkweigher to sense packs on a conveyor line of the checkweigher; and

a computer readable medium having instructions for causing a computer to receive sensing information from the independent sensors, determine if the pack is skewed based on a length of time that the pack is sensed, determine if consecutive packs are too closely spaced to obtain a proper weight based on a length of time between sensing the consecutive packs; and provide a message independent of the checkweigher representative of such determinations.

Claim 36. (Previously presented) The kit of claim 35 and further comprising an air pressure switch.

Claim 37. (Previously presented) The kit of claim 35 and further comprising a computer that executes the instructions and provides a display of the message.

Claim 38. (Previously presented) A kit for installing on a checkweigher to check the integrity of the checkweigher, the kit comprising:

a plurality of independent sensors for use on the checkweigher to sense packs on a conveyor line of the checkweigher;

a computer for coupling to the independent sensors, the computer having a display device, the computer receiving sensed information from the independent sensors, determining if the pack is skewed based on a length of time that the pack is sensed, determining if consecutive packs are too closely spaced to obtain a proper weight based on a length of time between sensing the consecutive packs; and providing a message independent of the checkweigher representative of such determinations.

Claim 39. (Previously presented)] The kit of claim 38 and further comprising a pressure switch, and wherein the independent sensors comprise three photo-eye sensors with reflectors.

Claim 40. (Previously presented) The kit of claim 39 wherein the computer comprises dedicated hardware, logic or a programmable logic controller.

Claim 41. (Previously presented) A computer readable medium having instructions for causing a computer to execute a method of checking the integrity of a checkweigher, the method comprising:

independently sensing a pack on a conveyor line of the checkweigher;

determining if the pack is skewed based on a length of time that the pack is sensed;

determining if consecutive packs are too closely spaced to obtain a proper weight based on a length of time between sensing the consecutive packs; and

providing a message independent of the checkweigher representative of such determinations.

providing a reject signal to a reject device if either determination is positive.

Claim 42. (Previously presented) The computer readable medium of claim 41 wherein the method further comprises independently detecting if a pack was properly rejected.

Claim 43 (Previously presented) The computer readable medium of claim 41 wherein the method further comprises independently detecting if a properly rejected pack is blocking a reject path.

Claim 44. (Previously presented) The computer readable medium of claim 41 wherein the method further comprises independently detecting if a pack was properly accepted.

Claim 45. (Previously presented) A computer readable medium having instructions for causing a computer to execute a method of checking the integrity of a checkweigher that measures the weight of packs while moving on a conveyor belt, the method using logic independent from the checkweigher comprising:

receiving accept and reject signals from the checkweigher based on the checkweigher=s measurements of the packs;

independently determining if the packs were properly positioned on the conveyor for weighing;

receiving sensor signals independent of the checkweigher indicative of whether packs are properly accepted or rejected in accordance with the accept and reject signals; and

generating messages regarding the integrity of the checkweigher system based on a comparison of the sensor signals and the accept and reject signals received from the checkweigher.

Claim 46. (Previously presented) The computer readable medium of claim 45 wherein the method further comprises generating a reject signal if it is determined that a pack is not properly positioned on the conveyor.

Claim 47. (Previously presented) The computer readable medium of claim 45 wherein the method further comprises logging rejected packs.

Claim 48. (Previously presented) The computer readable medium of claim 45 wherein the method further comprises generating a message if ten packs in a row were rejected.

Claim 49. (Previously presented) The computer readable medium of claim 45 wherein the method further comprises generating a message if ten of the last thirty packs were rejected.

Claim 50. (Previously presented) The computer readable medium of claim 45 wherein the method further comprises detecting if packs are backed up in various positions on the conveyor.

Claim 51. (Previously presented) The computer readable medium of claim 45 wherein the messages are selected from a group consisting of warnings, fatal errors and nonfatal faults.

Claim 52. (Previously presented) The computer readable medium of claim 45 wherein the messages are representative of faults selected from the list consisting of pack skew, insufficient gap, checkweigher response fault, checkweigher locked on, checkweigher locked off, air pressure fault, ten rejected in a row, ten of thirty rejected, pack not rejected, pack not accepted, photo-eye failure, line backup, and reject bin overflow.

Claim 53. (Previously presented) A kit for installing on a checkweigher to check the integrity of the checkweigher, the kit comprising:

a plurality of independent sensors for use on the checkweigher to sense packs on a conveyor line of the checkweigher; and

a computer readable medium having instructions for causing a computer to:

receive accept and reject signals from the checkweigher based on the checkweigher=s measurements of the packs;

independently determine if the packs were properly positioned on the conveyor for weighing;

receive sensor signals independent of the checkweigher indicative of whether packs are properly accepted or rejected in accordance with the accept and reject signals; and

generate messages regarding the integrity of the checkweigher system based on a comparison of the sensor signals and the accept and reject signals received from the checkweigher.

Claim 54. (Previously presented) The kit of claim 53 and wherein the generate message comprises a reject signal.

Claims 55-65 (canceled)